EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	(("6103720") or ("6057290")).PN.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/11/22 12:18
L2	421	(544/173).CCLS.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/11/22 12:19
L3	453	(514/231.2).CCLS.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/11/22 12:19
L4	236	(514/239.5).CCLS.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/11/22 12:20

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1600RXA

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS	4	AUG 28	ADISCTI Reloaded and Enhanced
NEWS	5	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS	6	SEP 11	CA/CAplus enhanced with more pre-1907 records
NEWS	7	SEP 21	CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS	8	SEP 25	CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS	9	SEP 25	CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS	10	SEP 25	CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS	11	SEP 28	CEABA-VTB classification code fields reloaded with new classification scheme
NEWS	12	OCT 19	LOGOFF HOLD duration extended to 120 minutes
NEWS	13	OCT 19	E-mail format enhanced
NEWS	14	OCT 23	Option to turn off MARPAT highlighting enhancements available
NEWS	15	OCT 23	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS	16	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	17	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	18	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	19	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS	20	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	21	NOV 13	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS	22	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS	23	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS	24	NOV 20	CA/CAplus patent kind codes will be updated

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:32:05 ON 22 NOV 2006

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.63	0.63

FILE 'REGISTRY' ENTERED AT 11:33:32 ON 22 NOV 2006
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES: 21 NOV 2006 HIGHEST RN 913812-85-8
DICTIONARY FILE UPDATES: 21 NOV 2006 HIGHEST RN 913812-85-8

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when
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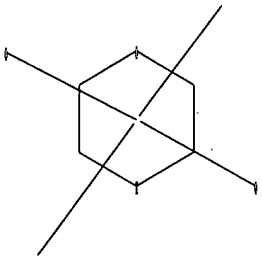
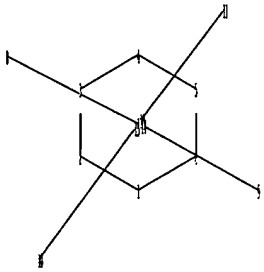
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\QUERIES\10509253.str





chain nodes :
8 9 10 11
ring nodes :
1 2 3 4 5 6
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 5-6
isolated ring systems :
containing 1 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS

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L1      STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1                STR
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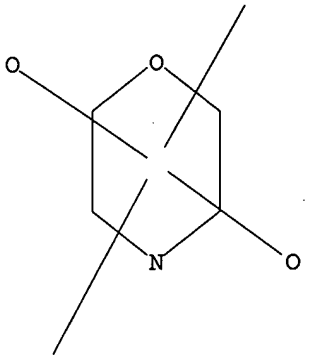


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Structure attributes must be viewed using STN Express query preparation.


=> s l1
SAMPLE SEARCH INITIATED 11:33:58 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    26770 TO ITERATE

  7.5% PROCESSED     2000 ITERATIONS                                 1 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:       525613 TO   545187
PROJECTED ANSWERS:             48 TO      486

L2             1 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 11:34:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   535473 TO ITERATE

100.0% PROCESSED   535473 ITERATIONS                               70 ANSWERS
SEARCH TIME: 00.00.03

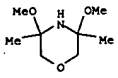
L3            70 SEA SSS FUL L1

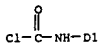
=> s l3 and caplus/lc
      52721328 CAPLUS/LC
L4           68 L3 AND CAPLUS/LC

=> s l3 not l4
L5            2 L3 NOT L4

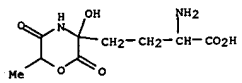
=> d l5 1-2
```

L5 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN 29721-58-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Carbamic chloride, (3,5-dimethoxy-3,5-dimethylmorpholinyl)- (9CI) (CA INDEX NAME)
MF C9 H17 Cl N2 O4
CI IDS





L5 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN 20276-82-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 3-Morpholinebutanoic acid, α-amino-3-hydroxy-6-methyl-2,5-dioxo- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,4-Oxazine-3-butyric acid, α-aminotetrahydro-3-hydroxy-6-methyl-2,5-dioxo- (8CI)
MF C9 H14 N2 O6



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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=> fil caplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                          ENTRY     SESSION
FULL ESTIMATED COST                                       177.70     178.33

FILE 'CAPLUS' ENTERED AT 11:37:22 ON 22 NOV 2006
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FILE LAST UPDATED: 21 Nov 2006  (20061121/ED)

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=> d his

     (FILE 'HOME' ENTERED AT 11:32:05 ON 22 NOV 2006)

     FILE 'REGISTRY' ENTERED AT 11:33:32 ON 22 NOV 2006
L1              STRUCTURE UPLOADED
L2            1 S L1
L3           70 S L1 FULL
L4           68 S L3 AND CAPLUS/LC
L5            2 S L3 NOT L4

     FILE 'CAPLUS' ENTERED AT 11:37:22 ON 22 NOV 2006

=> s l4
L6          35 L4

=> d ibib abs hitstr 1-35
```
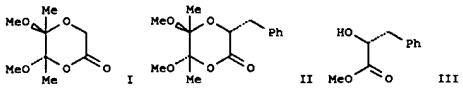
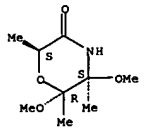

L6 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1051489 CAPLUS
DOCUMENT NUMBER: 142:176779
TITLE: Preparation of enantiopure butane-2,3-diacetals of glycolic acid and alkylation reactions leading to α-hydroxy acid and amide derivatives
AUTHOR(S): Ley, Steven V.; Diez, Elena; Dixon, Darren J.; Guy, Richard T.; Michel, Patrick; Nattrass, Gillian L.; Sheppard, Tom D.
CORPORATE SOURCE: Department of Chemistry, University of Cambridge, Cambridge, CB2 1EW, UK
SOURCE: Organic & Biomolecular Chemistry (2004), 2(24), 3608-3617
CODEN: OBCRAK; ISSN: 1477-0520
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:176779
GI



AB The preparation of butane 2,3-diacetal protected glycolic acid and related systems is described together with highly selective alkylation reactions of (R,R) and (S,S)-butane diacetal protected glycolic acid. These compds. are readily deprotected to give enantiopure α-hydroxy acids, α-hydroxy esters or α-hydroxy amides by suitable choice of conditions. The stereoselective synthesis of (5S,6S)-5,6-dimethoxy-5,6-dimethyl-1,4-dioxan-2-one (acetal) (I) was reported. The stereoselective alkylation of I with (bromomethyl)benzene gave (3R,5S,6S)-5,6-dimethoxy-5,6-dimethyl-3-(phenylmethyl)-1,4-dioxan-2-one (II). Ring opening and deprotection of II gave (αR)-α-hydroxybenzenepropanoic acid Me ester (III).
IT 403670-53-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (-)-di(methoxy)tri(methyl)-3-morpholinone using (hydroxy)propanamide and di(methoxy)butadiene as starting materials)
RN 403670-53-1 CAPLUS
CN 3-Morpholinone, 5,6-dimethoxy-2,5,6-trimethyl-, (2S,5S,6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L6 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:626640 CAPLUS
DOCUMENT NUMBER: 141:314593
TITLE: The preparation and alkylation of a butanedione-derived chiral glycine equivalent and its use for the synthesis of α-amino acids and α,α-disubstituted amino acids
AUTHOR(S): Harding, Christopher I.; Dixon, Darren J.; Ley, Steven V.
CORPORATE SOURCE: Department of Chemistry, University of Cambridge, Cambridge, CB2 1EW, UK
SOURCE: Tetrahedron (2004), 60(35), 7679-7692
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:314593
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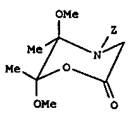
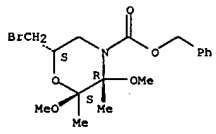


AB Benzyloxycarbonyl (Z)-protected glycine equivalent I has been prepared in enantiopure form and has been used in the synthesis of both α-substituted amino acids and α,α-disubstituted amino acids. The process involved deprotonation to form the corresponding enolates which underwent stereoselective alkylation with various electrophiles and upon hydrolysis gave the corresponding amino acid derivs. as enantiomerically pure products.
IT 565234-15-3P 565234-16-4P 565234-17-5P
565234-18-6P 565234-19-7P 565234-20-0P
565234-27-7P 763101-44-6P 763101-45-7P
763101-49-1P 763101-51-5P 763101-62-8P
763101-64-0P 763101-66-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and alkylation of butanedione-derived chiral glycine equivalent for synthesis of α-amino acids)
RN 565234-15-3 CAPLUS
CN 4-Morpholinecarboxylic acid, 6-(bromomethyl)-2,3-dimethoxy-2,3-dimethyl-, phenylmethyl ester, (2S,3R,6S)- (9CI) (CA INDEX NAME)

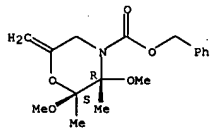
Absolute stereochemistry. Rotation (+).

L6 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



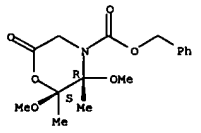
RN 565234-16-4 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-methylene-, phenylmethyl ester, (2S,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



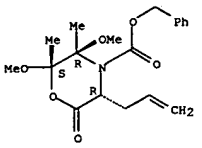
RN 565234-17-5 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



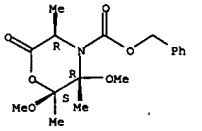
RN 565234-18-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(2-propenyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



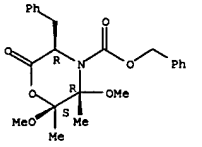
RN 565234-19-7 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 565234-20-0 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

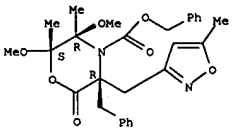


RN 565234-27-7 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

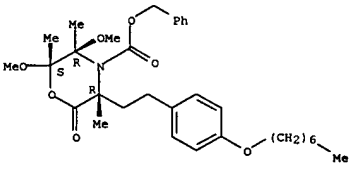
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-5-[(5-methyl-3-isoxazolyl)methyl]-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



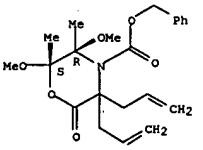
RN 763101-51-5 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-[2-[4-(heptyloxy)phenyl]ethyl]-2,3-dimethoxy-2,3,5-trimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

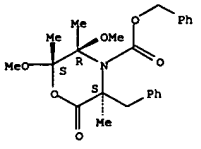


RN 763101-62-8 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5,5-di-2-propenyl-, phenylmethyl ester, (2S,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

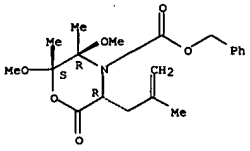


RN 763101-64-0 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-5-(2-methyl-2-propenyl)-6-oxo-5-(2-propenyl)-, phenylmethyl ester, (2S,3R,5S)- (9CI) (CA INDEX NAME)



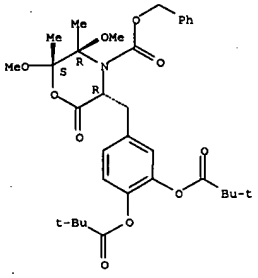
RN 763101-44-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-5-(2-methyl-2-propenyl)-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



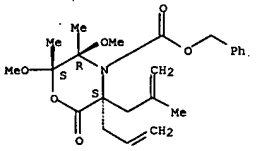
RN 763101-45-7 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-[[3,4-bis(2,2-dimethyl-1-oxopropoxy)phenyl]methyl]-2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



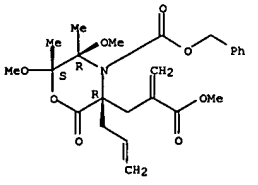
RN 763101-49-1 CAPLUS

Absolute stereochemistry. Rotation (+).



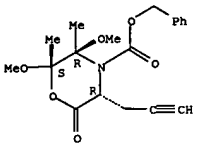
RN 763101-66-2 CAPLUS
CN 3-Morpholinepropanoic acid, 5,6-dimethoxy-5,6-dimethyl-α-methylene-2-oxo-4-[(phenylmethoxy)carbonyl]-3-(2-propenyl)-, methyl ester, (3R,5R,6S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



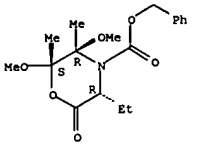
IT 565234-21-1P 565234-22-2P 565234-23-3P
565234-24-4P 565234-25-5P 565234-26-6P
763101-43-5P 763101-46-8P 763101-48-0P
763101-53-7P 763101-54-8P 763101-56-0P
763101-58-2P 763101-60-6P 845509-60-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and alkylation of butanedione-derived chiral glycine equivalent for
synthesis of α-amino acids)
RN 565234-21-1 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(2-propynyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



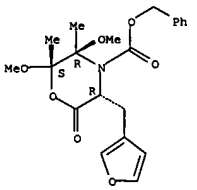
RN 565234-22-2 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-ethyl-2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



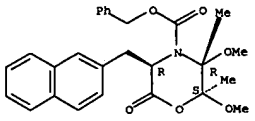
RN 565234-23-3 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-(3-furanylmethyl)-2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



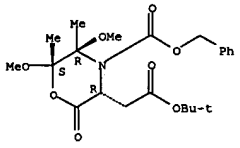
RN 565234-24-4 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-5-(2-naphthalenylmethyl)-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



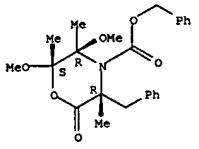
RN 565234-25-5 CAPLUS
CN 3-Morpholineacetic acid, 5,6-dimethoxy-5,6-dimethyl-2-oxo-4-[(phenylmethoxy)carbonyl]-, 1,1-dimethylethyl ester, (3R,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



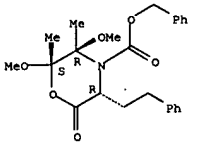
RN 565234-26-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



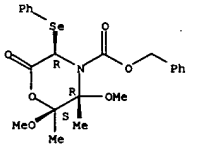
RN 763101-43-5 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(2-phenylethyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



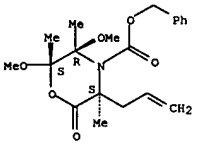
RN 763101-46-8 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(phenylseleno)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



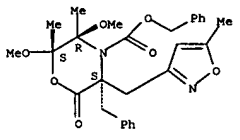
RN 763101-48-0 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-5-(2-propenyl)-, phenylmethyl ester, (2S,3R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



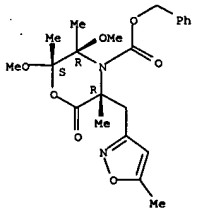
RN 763101-53-7 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-5-[(5-methyl-3-isoxazolyl)methyl]-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



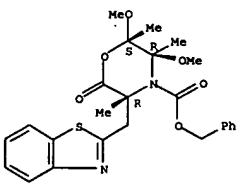
RN 763101-54-8 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-5-[(5-methyl-3-isoxazolyl)methyl]-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 763101-56-0 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-(2-benzothiazolylmethyl)-2,3-dimethoxy-2,3,5-trimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

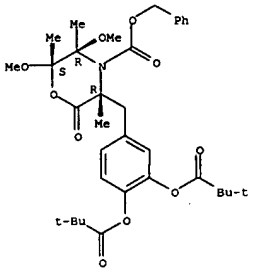
Absolute stereochemistry. Rotation (+).



RN 763101-58-2 CAPLUS

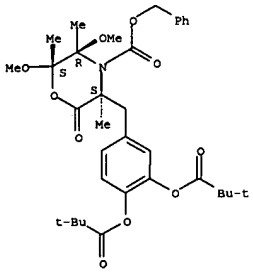
L6 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
CN 4-Morpholinecarboxylic acid, 5-[[3,4-bis(2,2-dimethyl-1-oxopropoxy)phenyl]methyl]-2,3-dimethoxy-2,3,5-trimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 763101-60-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-[[3,4-bis(2,2-dimethyl-1-oxopropoxy)phenyl]methyl]-2,3-dimethoxy-2,3,5-trimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5S)- (9CI) (CA INDEX NAME)

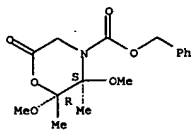
Absolute stereochemistry. Rotation (+).



RN 845509-60-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2R,3S)- (9CI) (CA INDEX NAME)

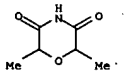
Absolute stereochemistry.

L6 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



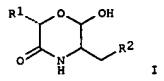
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 3 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:202747 CAPLUS
DOCUMENT NUMBER: 142:176721
TITLE: Product subclass 2: one oxygen and one nitrogen or phosphorus atom
AUTHOR(S): Ulrich, H.
CORPORATE SOURCE: Guilford, CT, 06437, USA
SOURCE: Science of Synthesis (2004), 17, 55-115
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Methods for preparing six-membered heteroatoms containing two unlike
heteroatoms selected from O, N, or P are reviewed including cyclization, ring transformation, aromatization, and substituent modification.
IT 4430-01-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of six-membered heteroatoms containing two unlike heteroatoms
selected from O, N, or P via cyclization, ring transformation, aromatization, and substituent modification)
RN 4430-01-7 CAPLUS
CN 3,5-Morpholinedione, 2,6-dimethyl- (8CI, 9CI) (CA INDEX NAME)

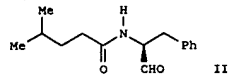


REFERENCE COUNT: 214 THERE ARE 214 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:923403 CAPLUS
DOCUMENT NUMBER: 140:181396
TITLE: Novel 6-Hydroxy-3-morpholinones as cornea permeable calpain inhibitors
AUTHOR(S): Nakamura, Masayuki; Miyashita, Hiroyuki; Yamaguchi, Masazumi; Shirasaki, Yoshihisa; Nakamura, Yoshikuni; Inoue, Jun
CORPORATE SOURCE: Research Laboratory, Senju Pharmaceutical Co., Ltd., Kobe, 651-2241, Japan
SOURCE: Bioorganic & Medicinal Chemistry (2003), 11(24), 5449-5460
CODEN: BMECEP; ISSN: 0968-0896
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:181396
GI



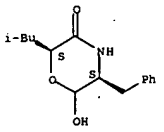
I



II

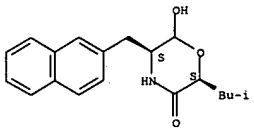
AB A novel series of 6-hydroxy-3-morpholinones I [R1 = Me2CH, Me2CHCH2, PhCH2; R2 = Ph, PhCH2, 2-naphthyl, 4-MeOC6H4, 4-BuOC6H4, 4-(cyclohexylmethyl)phenyl], in which the functional aldehyde and the hydroxy group of P2 site form a cyclic hemiacetal, was identified as calpain inhibitors. The placement of iso-Bu group at the 2-position of the 3-morpholinone (R1) was the most effective modification for inhibiting
μ- and m-calpains. Substitutions of benzyl at the 5-position in the S-configuration had virtually no effect on inhibitory activity. Several compds. showed appreciable selectivity for calpains over cathepsin B.
NMR
expts. demonstrated that (S,S)-I (R1 = Me2CHCH2; R2 = Ph) (SNJ-1757) was more stable to nucleophilic attack than the corresponding aldehyde inhibitor II. Furthermore, (S,S)-I (R1 = Me2CHCH2; R2 = Ph) proved to have better corneal permeability than II in an in vitro experiment
IT 611209-71-3P, SNJ 1757 611209-73-5P 611209-75-7P
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, water solubility and calpain inhibiting activity of amino
acid-derived chiral (hydroxy)oxazinones)
RN 611209-71-3 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(phenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



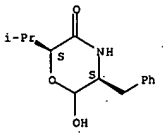
RN 611209-73-5 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(2-naphthalenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



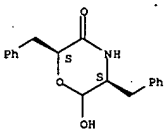
RN 611209-75-7 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(1-methylethyl)-5-(phenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



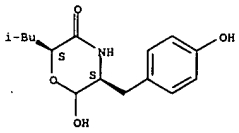
IT 611209-72-4P 611209-74-6P 611209-76-8P
611209-77-9P 611209-78-0P 611209-79-1P
611209-80-4P 611209-81-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, water solubility and calpain inhibiting activity of amino
acid-derived chiral (hydroxy)oxazinones)
RN 611209-72-4 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(2-phenylethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



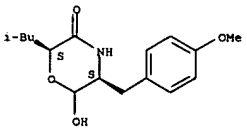
RN 611209-78-0 CAPLUS
CN 3-Morpholinone, 6-hydroxy-5-[(4-hydroxyphenyl)methyl]-2-(2-methylpropyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



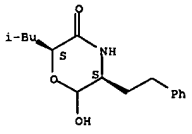
RN 611209-79-1 CAPLUS
CN 3-Morpholinone, 6-hydroxy-5-[(4-methoxyphenyl)methyl]-2-(2-methylpropyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



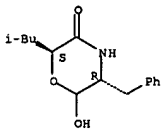
RN 611209-80-4 CAPLUS
CN 3-Morpholinone, 5-[(4-butoxyphenyl)methyl]-6-hydroxy-2-(2-methylpropyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



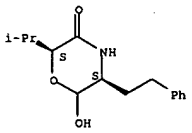
RN 611209-74-6 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(phenylmethyl)-, (2S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



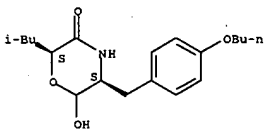
RN 611209-76-8 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(1-methylethyl)-5-(2-phenylethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



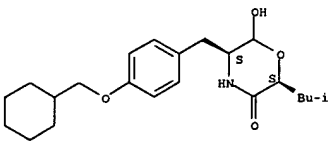
RN 611209-77-9 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2,5-bis(phenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 611209-81-5 CAPLUS
CN 3-Morpholinone, 5-[[4-(cyclohexylmethoxy)phenyl]methyl]-6-hydroxy-2-(2-methylpropyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



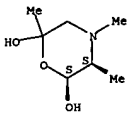
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:850930 CAPLUS
DOCUMENT NUMBER: 140:94174
TITLE: Reaction of Chloroacetone with Cytisine and d-Pseudoephedrine Alkaloids
AUTHOR(S): Nurkenov, O. A.; Gazaliev, A. M.; Turdybekov, K. M.; Bukeeva, A. B.; Kulakov, I. V.
CORPORATE SOURCE: Institute of Organic Synthesis and Coal Chemistry, Ministry of Education and Science of Kazakhstan, Karaganda, Kazakhstan
SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2003), 73(6), 961-963
CODEN: RJGCEK; ISSN: 1070-3632
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:94174

AB Alkylation of cytisine and d-pseudoephedrine alkaloids with chloroacetone was performed. The target product of the reaction with cytisine is aminoacetone and of the reaction with d-pseudoephedrine, a morpholine derivative

IT 643001-06-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of chloroacetone with cytisine and d-pseudoephedrine alkaloids)
RN 643001-06-3 CAPLUS
CN 2,6-Morpholinediol, 2,4,5-trimethyl-, (5S,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



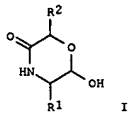
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:796676 CAPLUS
DOCUMENT NUMBER: 139:307776
TITLE: Preparation of 6-hydroxy-3-morpholinone derivatives as calpain inhibitors
INVENTOR(S): Nakamura, Masayuki; Inoue, Jun
PATENT ASSIGNEE(S): Senju Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003082837	A1	20031009	WO 2003-JP3910	20030327
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003236180	A1	20031013	AU 2003-236180	20030327
EP 1491537	A1	20041229	EP 2003-745432	20030327
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005176704	A1	20050811	US 2003-509253	20030327
CN 1656084	A	20050817	CN 2003-812270	20030327

PRIORITY APPLN. INFO.: JP 2002-97186 A 20020329
JP 2002-97176 A 20020329
WO 2003-JP3910 W 20030327

OTHER SOURCE(S): MARPAT 139:307776
GI



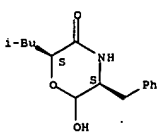
I

AB Compds. represented by the following general formula (I) (wherein R1 and R2 each represents optionally substituted lower alkyl) or salts thereof are prepared The compds. I or salts thereof have potent calpain inhibitory

L6 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
activity and are useful for the treatment and prevention of calpain-related diseases such as ischemia, immune diseases, Alzheimer's disease, osteoporosis, diseases caused by brain tissue disorders, cataract, glaucoma, retinochoroidal disease, posterior eye complex caused by photocoagulation, and diseases accompanied by neovascularization. Thus, (1S)-1-(2-dioxolanyl)-2-phenylethylamine 15, L-leucic acid 10, 1-hydroxybenzotriazole 12, and Et3N 8.6 g were dissolve din 120 mL DMF, treated with a suspension of 16 g 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride in 40 mL CH2Cl2 under ice-cooling, and stirred at room temp. for 18 h to give, after workup and crystn. from EtOAc, 75% (2S)-N-[(1S)-1-(2-dioxolanyl)-2-phenylethyl]-2-hydroxy-4-methylpentanamide (II). To a soln. of 2.0 g II in 150 mL THF was added 150 mL aq. HCl and stirred at room temp. for 18 h followed by workup and purifn. using HPLC (YMC-Pack ODS-A column) to give 29% (2S,5S)-5-benzyl-6-hydroxy-2-(2-methylpropyl)-3-morpholinone (III). III and (2S,5S)-5-(4-biphenylmethyl)-6-hydroxy-2-(2-methylpropyl)-3-morpholinone showed IC50 of 0.70 and 0.25 μM against μ-calpain, resp., and 0.93 and 0.36 μM against m-calpain, resp. Pharmaceutical formulations, e.g. an injection soln. contg. III, were described.

IT 611209-71-3P 611209-72-4P 611209-73-5P
611209-74-6P 611209-75-7P 611209-76-8P
611209-77-9P 611209-78-0P 611209-79-1P
611209-80-4P 611209-81-5P 611209-82-6P
611209-83-7P 611209-84-8P 611209-85-9P
611209-86-0P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 6-hydroxy-3-morpholinone derivs. as calpain inhibitors for treatment or prevention of calpain-related diseases)
RN 611209-71-3 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(phenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

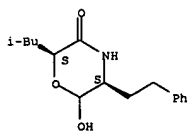
Absolute stereochemistry.



RN 611209-72-4 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(2-phenylethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

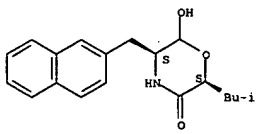
Absolute stereochemistry.

L6 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



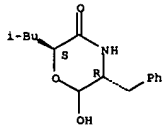
RN 611209-73-5 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(2-naphthalenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



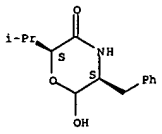
RN 611209-74-6 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-(phenylmethyl)-, (2S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



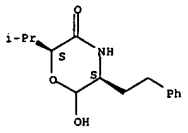
RN 611209-75-7 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(1-methylethyl)-5-(phenylmethyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



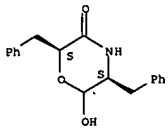
RN 611209-76-8 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(1-methylethyl)-5-(2-phenylethyl)-, (2S,5S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



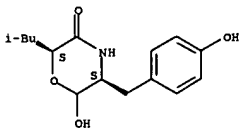
RN 611209-77-9 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2,5-bis(phenylmethyl)-, (2S,5S)- (9CI) (CA
INDEX NAME)

Absolute stereochemistry.



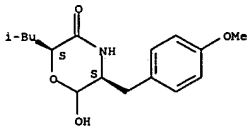
RN 611209-78-0 CAPLUS
CN 3-Morpholinone,
6-hydroxy-5-[(4-hydroxyphenyl)methyl]-2-(2-methylpropyl)-,
(2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



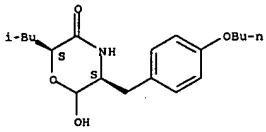
RN 611209-79-1 CAPLUS
CN 3-Morpholinone,
6-hydroxy-5-[(4-methoxyphenyl)methyl]-2-(2-methylpropyl)-,
(2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



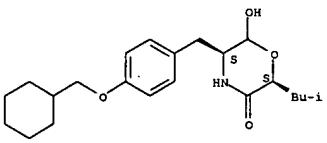
RN 611209-80-4 CAPLUS
CN 3-Morpholinone, 5-[(4-butoxyphenyl)methyl]-6-hydroxy-2-(2-methylpropyl)-,
(2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



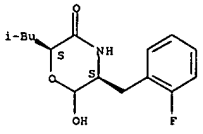
RN 611209-81-5 CAPLUS
CN 3-Morpholinone, 5-[(4-(cyclohexylmethoxy)phenyl]methyl]-6-hydroxy-2-(2-
methylpropyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



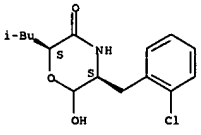
RN 611209-82-6 CAPLUS
CN 3-Morpholinone, 5-[(2-fluorophenyl)methyl]-6-hydroxy-2-(2-methylpropyl)-,
(2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



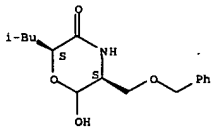
RN 611209-83-7 CAPLUS
CN 3-Morpholinone, 5-[(2-chlorophenyl)methyl]-6-hydroxy-2-(2-methylpropyl)-,
(2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



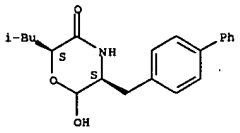
RN 611209-84-8 CAPLUS
CN 3-Morpholinone, 6-hydroxy-2-(2-methylpropyl)-5-[(phenylmethoxy)methyl]-,
(2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



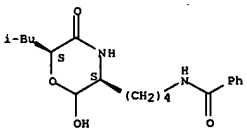
RN 611209-85-9 CAPLUS
CN 3-Morpholinone, 5-([1,1'-biphenyl]-4-ylmethyl)-6-hydroxy-2-(2-
methylpropyl)-, (2S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 611209-86-0 CAPLUS
CN Benzamide, N-[4-[(3S,6S)-2-hydroxy-6-(2-methylpropyl)-5-oxo-3-
morpholinyl]butyl]- (9CI) (CA INDEX NAME)

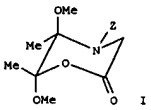
Absolute stereochemistry.



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:107383 CAPLUS
DOCUMENT NUMBER: 139:117664
TITLE: A 2,3-butanedione protected chiral glycine equivalent - a new building block for the stereoselective synthesis of enantiopure N-protected α-amino acids
AUTHOR(S): Dixon, Darren J.; Harding, Christopher I.; Ley, Steven V.; Tilbrook, D. Matthew G.
CORPORATE SOURCE: Department of Chemistry, University of Cambridge, Cambridge, CB2 1EW, UK
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2003), (4), 468-469
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:117664
GI

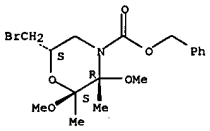


AB A new chiral glycine equivalent I (Z = benzyloxycarbonyl) has been synthesized from glycidol using a chiral memory protocol and its use in the synthesis of N-Z protected α-amino acids was demonstrated in a series of diastereoselective lithium enolate alkylation reactions and subsequent acid hydrolyzes.

IT 565234-15-3P 565234-16-4P 565234-17-5P
565234-19-7P 565234-20-0P 565234-26-6P
565234-27-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(butanedione-protected chiral glycine equivalent as building block for stereoselective synthesis of N-protected α-amino acids)

RN 565234-15-3 CAPLUS
CN 4-Morpholinecarboxylic acid, 6-(bromomethyl)-2,3-dimethoxy-2,3-dimethyl-, phenylmethyl ester, (2S,3R,6S)- (9CI) (CA INDEX NAME)

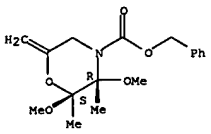
Absolute stereochemistry. Rotation (+).



L6 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

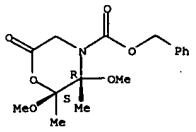
RN 565234-16-4 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-methylene-, phenylmethyl ester, (2S,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



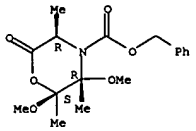
RN 565234-17-5 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 565234-19-7 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

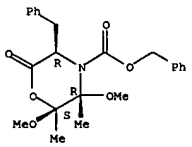
Absolute stereochemistry. Rotation (+).



RN 565234-20-0 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

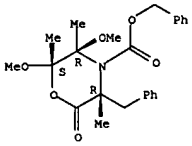
Absolute stereochemistry. Rotation (+).

L6 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



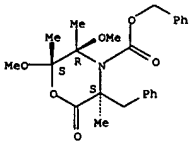
RN 565234-26-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 565234-27-7 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3,5-trimethyl-6-oxo-5-(phenylmethyl)-, phenylmethyl ester, (2S,3R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

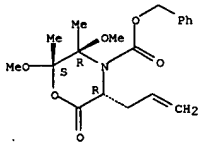


IT 565234-18-6P 565234-21-1P 565234-22-2P
565234-23-3P 565234-24-4P 565234-25-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(butanedione-protected chiral glycine equivalent as building block for stereoselective synthesis of N-protected α-amino acids)

RN 565234-18-6 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(2-propenyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

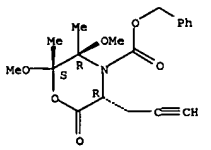
Absolute stereochemistry. Rotation (+).

L6 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



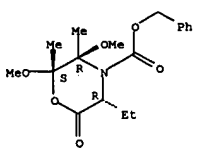
RN 565234-21-1 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-6-oxo-5-(2-propynyl)-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 565234-22-2 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-ethyl-2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

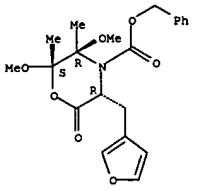
Absolute stereochemistry. Rotation (+).



RN 565234-23-3 CAPLUS
CN 4-Morpholinecarboxylic acid, 5-(3-furanylmethyl)-2,3-dimethoxy-2,3-dimethyl-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

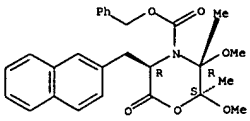
Absolute stereochemistry. Rotation (-).

L6 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



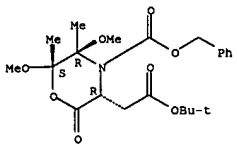
RN 565234-24-4 CAPLUS
CN 4-Morpholinecarboxylic acid, 2,3-dimethoxy-2,3-dimethyl-5-(2-naphthalenylmethyl)-6-oxo-, phenylmethyl ester, (2S,3R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 565234-25-5 CAPLUS
CN 3-Morpholineacetic acid, 5,6-dimethoxy-5,6-dimethyl-2-oxo-4-[(phenylmethoxy)carbonyl]-, 1,1-dimethylethyl ester, (3R,5R,6S)- (9CI) (CA INDEX NAME)

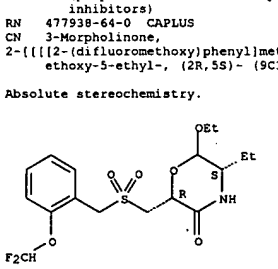
Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
COCF2CONR52, COCONR5R6, COCO2R5, COCH2OR5, COCH2NR6SO2R5, or COCOR5; where
R5 is H or (un)substituted alkyl; R6 is H, OH or NR5R6 is a ring; R7 is H,
alkyl and R8 is OH or CR7R8 are oxo; R16 is H, X4, CF3, NR6OR6, etc.; X4 comprises a heteromono- or -bicyclic ring; R1 = H, alkyl; R2 = H, cyano; R2 = H, cyano, -X5-NR122, -X5-NR12COR12, etc., where X5 is a bond or alkylene and R12 is H, alkyl, or haloalkyl; or CR1R2 may form a ring; R4 = alkylene-NR122, alkylene-NR12-COR12, etc.; X6 = -X5-NR122, -X5-NR12COR12, etc.; R15 = H, alkyl; R17, R18 = (un)substituted alkyl (with provisos)] and their pharmaceutically acceptable salts and N-oxides as selective cathepsin S inhibitors for use as therapeutic agents. Thus, ester I was prepd. via amide coupling reaction and showed Ki .ltorsim. 0.01 μM for inhibition of cathepsin S.
IT 477938-64-0P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of amide compds. and compns. as selective cathepsin S inhibitors)
RN 477938-64-0 CAPLUS
CN 3-Morpholinone, 2-[[[[2-(difluoromethoxy)phenyl]methyl]sulfonyl]methyl]-6-ethoxy-5-ethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

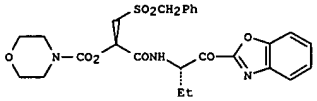
Absolute stereochemistry.



L6 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:946262 CAPLUS
DOCUMENT NUMBER: 138:24946
TITLE: Preparation of amide compounds and compositions as selective cathepsin S inhibitors
INVENTOR(S): Graupe, Michael; Li, Jiayao; Link, John O.; Zipfel, Sheila; Timm, Andreas P.; Aldous, David J.; Thurairatnam, Sukanthini
PATENT ASSIGNEE(S): Axys Pharmaceuticals, Inc., USA; Aventis Pharmaceuticals Inc.
SOURCE: PCT Int. Appl., 196 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002098850	A2	20021212	WO 2002-US17411	20020603
WO 2002098850	A3	20030424		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2448418	AA	20021212	CA 2002-2448418	20020603
EP 1397340	A2	20040317	EP 2002-734640	20020603
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1512983	A	20040714	CN 2002-811152	20020603
BR 2002010912	A	20040831	BR 2002-10912	20020603
JP 2004535422	T2	20041125	JP 2003-501840	20020603
ZA 2003008392	A	20050128	ZA 2003-8392	20031028
US 2004142999	A1	20040722	US 2003-719080	20031121
PRIORITY APPLN. INFO.:			US 2001-295301P	P 20010601
			WO 2002-US17411	W 20020603

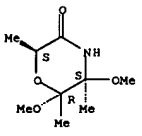
OTHER SOURCE(S): MARPAT 138:24946
GI



AB The invention relates to compds. R3C(X2)(X7)CO-X1 [X1 = NHC(R1)(R2)X3 or NHX4; X2 = H, F, OH, OR4, NHR15, or NR17R18; X7 = H or X2 = X7 = F; R3 = alkyl or CR62X6; X3 = cyano, CR7R8R16, CR6(OR6)2, CH2COR16, CH:CHSO2R5,

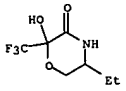
L6 ANSWER 9 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:830002 CAPLUS
DOCUMENT NUMBER: 136:232254
TITLE: A new route to butane-1,2-diacetals and the development of alternative substitution patterns to facilitate differential protection of the products
AUTHOR(S): Ley, Steven V.; Michel, Patrick
CORPORATE SOURCE: Department of Chemistry, University of Cambridge, Cambridge, CB2 1EW, UK
SOURCE: Synlett (2001), (11), 1793-1795
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:232254
AB The utility of 2,3-dialkoxybuta-1,3-dienes as reagents for the protection of vicinal diols and α-hydroxy acids as their corresponding 1,2-diacetals is demonstrated together with their later deprotection under mild reaction conditions.
IT 403670-53-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(new route to butane-1,2-diacetals and development of alternative substitution patterns to facilitate differential protection of products)
RN 403670-53-1 CAPLUS
CN 3-Morpholinone, 5,6-dimethoxy-2,5,6-trimethyl-, (2S,5S,6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:289927 CAPLUS
DOCUMENT NUMBER: 128:294416
TITLE: Trifluoropyruvamides from isocyanides and trifluoroacetic anhydride
AUTHOR(S): El Kaim, Laurent; Pinot-Perigord, Eammanuel
CORPORATE SOURCE: Laboratoire Reacteurs et Processus, Ecole Nationale Superieure de Techniques Avancees, Paris, 75015, Fr.
SOURCE: Tetrahedron (1998), 54(15), 3799-3806
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 128:294416
AB Addition of trifluoroacetic anhydride to isocyanides, e.g. 4-ClC6H4CH2N=C:, proceeds smoothly to give trifluoropyruvamides such as 4-ClC6H4CH2NHCOC(OH)2CF3 in high yield after treatment with H2O or alcs.
IT 206057-79-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of trifluoropyruvamides by addition of trifluoroacetic anhydride to isocyanides)
RN 206057-79-6 CAPLUS
CN 3-Morpholinone, 5-ethyl-2-hydroxy-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)

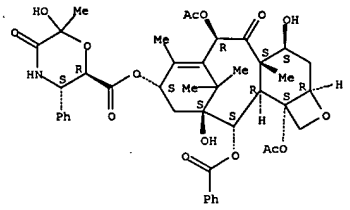


REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

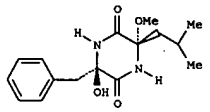
L6 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:705638 CAPLUS
DOCUMENT NUMBER: 126:31504
TITLE: An Improved Method for Separating Paclitaxel and Cephalomannine Using Ozone and Girard Reagents
AUTHOR(S): Beckvermit, Jeff T.; Anziano, Dominick J.; Murray, Christopher K.
CORPORATE SOURCE: Synthetic Chemistry Research and Development Group, Hauser Chemical Research Inc., Boulder, CO, 80301, USA
SOURCE: Journal of Organic Chemistry (1996), 61(25), 9038-9040
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The bulk drug, paclitaxel, a potent antitumor agent, is isolated from the bark of the pacific yew tree, Taxus brevifolia. Another naturally occurring taxane, cephalomannine, is difficult to sep. from paclitaxel due to structural similarities. However, cephalomannine can be selectively oxidized in the presence of paclitaxel using ozone. Subsequently, the oxidized cephalomannine can be separated from paclitaxel by conversion to a water soluble Girard hydrazone, followed by liquid/liquid extraction All previously described methods for separation of paclitaxel and cephalomannine, or cephalomannine derivs., have required difficult and potentially expensive chromatog.
IT 157956-83-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(removal of cephalomannine from paclitaxel by oxidation and hydrazone formation)
RN 157956-83-7 CAPLUS
CN 2-Morpholinecarboxylic acid, 6-hydroxy-6-methyl-5-oxo-3-phenyl-, 6,12b-bis(acetyloxy)-12-(benzoyloxy)-2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-4,11-dihydroxy-4a,8,13,13-tetramethyl-5-oxo-7,11-methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester, [2aR-[2aα,4β,4aβ,6β,9α(2R*,3S*),11α,12α,12aα,12bα]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS

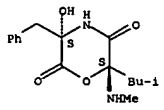
L6 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:678672 CAPLUS
DOCUMENT NUMBER: 126:4338
TITLE: Secondary mold metabolites. Part 52. Structure elucidation of diatretol. A new diketopiperazine metabolite from the fungus Clitocybe diatreta
AUTHOR(S): Arnone, Alberto; Capelli, Silvia; Nasini, Gianluca; Valdo Meille, Stefano; Vajna De Pava, Orso
CORPORATE SOURCE: Centro C.N.R. Sostanze Organiche Naturali, Politecnico Milano, Milan, I-20131, Italy
SOURCE: Liebigs Annalen (1996), (11), 1875-1877
CODEN: LANAEM; ISSN: 0947-3440
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB In the culture broth of C. diatreta, a novel diketopiperazine metabolite, diatretol (I), was detected by chemical screening. The structure was established on the basis of 1H- and 13C-NMR data and single crystal x-ray anal. I exhibits a low antibacterial activity and inhibits the growth germination of Lepidium sativum and Bacillus. I was also isolated from Armillaria ectype.
IT 145398-57-8, Metacytofilin
RL: PRP (Properties)
(mol. dimensions of)
RN 145398-57-8 CAPLUS
CN 2,5-Morpholinedione, 3-hydroxy-6-(methylamino)-6-(2-methylpropyl)-3-(phenylmethyl)-, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L6 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:595909 CAPLUS
DOCUMENT NUMBER: 121:195909
TITLE: Oxidation products of cephalomannine
INVENTOR(S): Murray, Christopher K.; Beckvermit, Jeffrey T.; Ziebarth, Timothy D.
PATENT ASSIGNEE(S): Hauser Chemical Research, Inc., USA
SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5336684	A	19940809	US 1993-53902	19930426
CA 2161138	AA	19941110	CA 1994-2161138	19940425
CA 2161138	C	20060725		
WO 9425449	A1	19941110	WO 1994-US4519	19940425
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9467735	A1	19941121	AU 1994-67735	19940425
AU 685119	B2	19980115		
EP 696279	A1	19960214	EP 1994-915879	19940425
EP 696279	B1	19970326		
R: DE, FR, GB				
JP 08509733	T2	19961015	JP 1994-524451	19940425
JP 3759602	B2	20060329		

PRIORITY APPLN. INFO.: US 1993-53902 A 19930426
WO 1994-US4519 W 19940425

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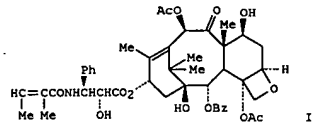


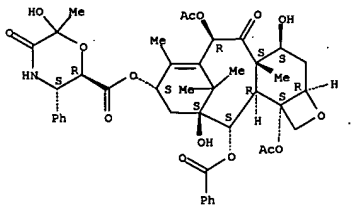
I

AB Antineoplastic taxol derivs. are derived by selective oxidation of the alkene portion of the side chain of cephalomannine (I). The derivs. display high activity in promoting assembly of microtubulin and also displays cytotoxic activity against malignant cells.

IT 157956-83-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(antineoplastic cephalomannine oxidation products)

L6 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
RN 157956-83-7 CAPLUS
CN 2-Morpholinecarboxylic acid, 6-hydroxy-6-methyl-5-oxo-3-phenyl-, 6,12b-bis(acetyloxy)-12-(benzoyloxy)-2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-4,11-dihydroxy-4a,8,13,13-tetramethyl-5-oxo-7,11-methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester, [2aR-[2aα,4β,4aβ,6β,9α(2R*,3S*),11α,12α,12aα,12bα]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

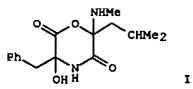


L6 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:189882 CAPLUS
DOCUMENT NUMBER: 120:189882
TITLE: Novel immunosuppressing metacytofilin and its manufacture with Metarhizium species
INVENTOR(S): Ishizuka, Masaaki; Iijima, Masatomi; Osanawa, Hiroshi; Okami, Yoshiro; Maeda, Kenji; Takeuchi, Tomio
PATENT ASSIGNEE(S): Microbial Chemistry Research Foundation, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05310717	A2	19931122	JP 1991-313041	19911102

PRIORITY APPLN. INFO.: JP 1991-313041 19911102

GI



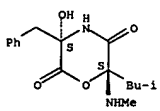
I

AB Immunosuppressing metacytofilin (I) is manufactured by cultivation of I-producing Metarhizium sp. Metarhizium sp. TA2759 (FERM P-12579) was shake-cultured in 10 L medium containing glucose, soluble starch, yeast extract, etc., at 27° for 4 days to manufacture 40 mg I, which at 100 μg/mL inhibited 56% interleukin 2-induced growth of Con A-treated T cell.

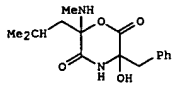
IT 145398-57-8P, Metacytofilin
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(manufacture of, with Metarhizium, as immunosuppressant)

RN 145398-57-8 CAPLUS
CN 2,5-Morpholinedione, 3-hydroxy-6-(methylamino)-6-(2-methylpropyl)-3-(phenylmethyl)-, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L6 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:55707 CAPLUS
DOCUMENT NUMBER: 118:55707
TITLE: Metacytofilin, a novel immunomodulator produced by Metarhizium sp. TA2759
AUTHOR(S): Ijima, Masatomi; Masuda, Tohru; Nakamura, Hikaru; Naganawa, Hiroshi; Kurasawa, Shogo; Okami, Yoshiro; Ishizuka, Masaaki; Takeuchi, Tomio; Iitaka, Yoichi
CORPORATE SOURCE: Inst. Chemotherapy, MCRF, Numazu, 410-03, Japan
SOURCE: Journal of Antibiotics (1992), 45(9), 1553-6
CODEN: JANTAJ; ISSN: 0021-8820
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



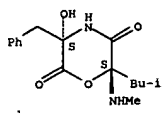
I

AB The production, isolation, physicochem. properties, structure and biol. activity of metacytofilin (I) are reported. The absolute configuration of I was not determined Crystal data for I are given. I exhibited immunosuppressive activity in a mixed lymphocyte culture reaction and inhibited antibody formation in spleen cells.

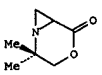
IT 145398-57-8P, Metacytofilin
RL: PREP (Preparation)
(structure and isolation and immunosuppressant activity of, from Metarhizium)

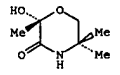
RN 145398-57-8 CAPLUS
CN 2,5-Morpholinedione, 3-hydroxy-6-(methylamino)-6-(2-methylpropyl)-3-(phenylmethyl)-, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

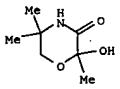


L6 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:528924 CAPLUS
DOCUMENT NUMBER: 109:128924
TITLE: Synthesis, spatial structure, and biological activity of 2-hydroxy-3-oxo-2,5,5-trimethylmorpholine
AUTHOR(S): Krutius, O.; Eremeev, A. V.; Mishnev, A. F.; Bleidelis, J.; Belyakov, S. V.; Odinets, A. G.; Berzins, M.; Berzina, D.; Kimenis, A.
CORPORATE SOURCE: Inst. Org. Sint., Riga, USSR
SOURCE: Latvijas PSR Zinatnu Akademijas Vestis, Kimijas Serija
(1987), (6), 745-50
CODEN: LZAKAM; ISSN: 0002-3248
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

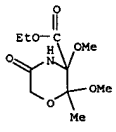

I


II

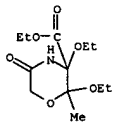
AB Reaction of Me 2,3-dibromopropionate with 2-amino-2-methyl-1-propanol gave azaoxabicycloheptanone I and morpholinone II. The structure of II was determined by x-ray crystal anal. II has hepatoprotector and antitumor activity.
IT 53153-49-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation crystal structure, and antitumor and hepatoprotector activity of)
RN 53153-49-4 CAPLUS
CN 3-Morpholinone, 2-hydroxy-2,5,5-trimethyl- (9CI) (CA INDEX NAME)



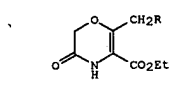
L6 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

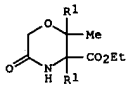


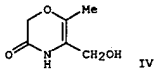
RN 83485-89-6 CAPLUS
CN 3-Morpholinecarboxylic acid, 2,3-diethoxy-2-methyl-5-oxo-, ethyl ester (9CI) (CA INDEX NAME)

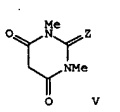


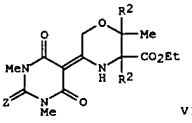
L6 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1982:582321 CAPLUS
DOCUMENT NUMBER: 97:182321
TITLE: Studies on the chemistry of 1,4-oxazines. VIII. Studies on the reactivity of ethyl 5,6-dihydro-2-methyl-5-oxo-4H-1,4-oxazine-3-carboxylate
AUTHOR(S): Bartsch, Herbert; Haubold, Gerhard
CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Wien, Vienna, A-1090, Austria
SOURCE: Archiv der Pharmazie (Weinheim, Germany) (1982), 315(9), 761-6
CODEN: ARPMAS; ISSN: 0365-6233
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 97:182321
GI


I, R=H
II, R=Br


III

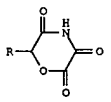

IV

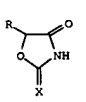

V


VI

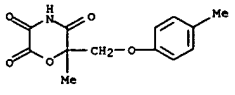
AB The reactions of the title compound (I) were studied. Bromination of I with NBS did not give the allyl bromide II but gave instead III (R1 = Br), characterized as the dialkoxy products III (R1 = MeO, EtO). Reduction of I with H2-Pd/C gave III (R1 = H); LiAlH4 reduction gave IV. Of several CH-acidic compds., only V (Z = O, S) condensed with I to give VI (R2R2 = bond). The structure of VI (R2R2 = bond, Z = O) was established by hydrogenation to VI (R2 = H, Z = O).
IT 83485-88-5P 83485-89-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 83485-88-5 CAPLUS
CN 3-Morpholinecarboxylic acid, 2,3-dimethoxy-2-methyl-5-oxo-, ethyl ester (9CI) (CA INDEX NAME)

L6 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:180142 CAPLUS
DOCUMENT NUMBER: 84:180142
TITLE: Cyclization reactions of α-hydroxy-imidates with oxalyl chloride and NN'-dicyclohexylcarbodi-imide
AUTHOR(S): Butt, Mohammed I.; Neilson, Douglas G.; Watson, Kathleen; Hull, Roy
CORPORATE SOURCE: Dep. Chem., Univ. Dundee, Dundee, UK
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1976), (5), 542-5
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI


II

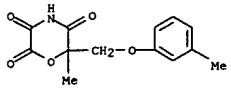

III

AB RCH2CMe(OH)C(:NH)OEt.HCl (I.HCl; R = 4-MeC6H4O, 3-MeC6H4O, Me) with (COCl)2 in CCl4 gave the morpholine triones II, whereas I with base and (COCl)2 gave mainly the oxazolidinones III (X = O) and small amts. of II. I.HCl (R = 4-, 3-MeC6H4O) reacted with R1N:C:NR1 (R1 = cyclohexyl) in the presence of CuCl2 to give a mixture of N,N'-dicyclohexylurea, cyclohexylamine hydrochloride, and the oxazolidine imines III (X = NR1); the free bases did not react under similar conditions. Mechanisms for the reactions are proposed.
IT 59375-88-1P 59375-89-2P 59375-90-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 59375-88-1 CAPLUS
CN 2,3,5-Morpholinetrione, 6-methyl-6-[(4-methylphenoxy)methyl]- (9CI) (CA INDEX NAME)

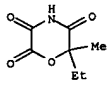


RN 59375-89-2 CAPLUS
CN 2,3,5-Morpholinetrione, 6-methyl-6-[(3-methylphenoxy)methyl]- (9CI) (CA INDEX NAME)

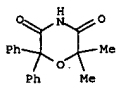
L6 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



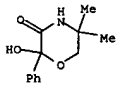
RN 59375-90-5 CAPLUS
CN 2,3,5-Morpholinetrione, 6-ethyl-6-methyl- (9CI) (CA INDEX NAME)



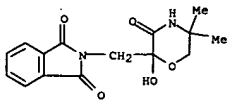
L6 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:144577 CAPLUS
DOCUMENT NUMBER: 84:144577
TITLE: Synthesis and biological evaluation of substituted 2,2'-oxybis(propionic acid) derivatives and related compounds
AUTHOR(S): Bennett, Gregory B.; Houlihan, William J.; Mason, Robert B.; Engstrom, Robert G.
CORPORATE SOURCE: Med. Chem. Dep., Sandoz, Inc., East Hanover, NJ, USA
SOURCE: Journal of Medicinal Chemistry (1976), 19(5), 709-14
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of 2,2'-oxybis(propionic acid) derivs., cyclic imides, and other analogs was prepared and hypolipidemic activity measured. The lipid-lowering activity of various 2,2,5,5-tetrasubstituted furan derivs. was also measured. No significant hypolipidemic activity was observed Structure-activity relationships are discussed.
IT 58607-31-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and hypolipidemic activity of)
RN 58607-31-1 CAPLUS
CN 3,5-Morpholinedione, 2,2-dimethyl-6,6-diphenyl- (9CI) (CA INDEX NAME)



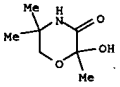
L6 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:531511 CAPLUS
DOCUMENT NUMBER: 83:131511
TITLE: Adducts from acyl chlorides and 2-unsubstituted oxazolines. Formation and reactions
AUTHOR(S): Golding, Bernard T.; Hall, David R.
CORPORATE SOURCE: Dep. Mol. Sci., University of Warwick, Coventry, UK
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1975), (13), 1302-8
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 83:131511
GI For diagram(s), see printed CA Issue.
AB Acyl chlorides reacted with I (R = Me, R1 = H, R2 = CO2Et; R = H, R1 = R2 = Me) to give 1:1 adducts which then underwent reaction with bases or nucleophiles. Thus the adduct from I (R = H, R1 = R2 = Me) and R3CH2COCl (R3 = phthalimido) (II) reacted with anhydrous Et3N to give the corresponding adducts III and IV; the adduct from I (R = Me, R1 = H, R2 = CO2Et) and II reacted with wet Et3N to give the corresponding products R3CH2CONHCH(CO2Et)C(OR4)Me2 (R4 = H, CHO) and with MeOH-Et3N to give IV.
IT 53153-50-7P 57624-84-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 53153-50-7 CAPLUS
CN 3-Morpholinone, 2-hydroxy-5,5-dimethyl-2-phenyl- (9CI) (CA INDEX NAME)



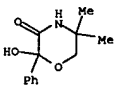
RN 57624-84-7 CAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[(2-hydroxy-5,5-dimethyl-3-oxo-2-morpholinyl)methyl]- (9CI) (CA INDEX NAME)



L6 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:97361 CAPLUS
DOCUMENT NUMBER: 82:97361
TITLE: Photochemical reactivity of imino lactones. Photoreduction and photoelimination
AUTHOR(S): Koch, Tad H.; Olesen, John A.; DeNiro, James
CORPORATE SOURCE: Dep. Chem., Univ. Colorado, Boulder, CO, USA
SOURCE: Journal of Organic Chemistry (1975), 40(1), 14-19
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The photochem. reactivity of 3 imino lactones (I; R = Me, Ph, Bu) is described. I (R = Me, Ph) are photostable with respect to the [2+2] photocycloaddn. reaction to the C-N double bond. I (R = Me) undergoes photoreductive dimerization in 2-propanol, I (R = Bu) photoeliminates propene to give I (R = Me), and I (R = Ph) is photostable. Possible mechanisms for the reductive dimerization and elimination reactions are discussed.
IT 53153-49-4P 53153-50-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 53153-49-4 CAPLUS
CN 3-Morpholinone, 2-hydroxy-2,5,5-trimethyl- (9CI) (CA INDEX NAME)



RN 53153-50-7 CAPLUS
CN 3-Morpholinone, 2-hydroxy-5,5-dimethyl-2-phenyl- (9CI) (CA INDEX NAME)



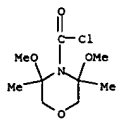
L6 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:85488 CAPLUS
DOCUMENT NUMBER: 66:85488
TITLE: Ether derivatives of carbamoyl halides
INVENTOR(S): Koenig, Karl H.
PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik AG
SOURCE: Ger., 3 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1232946		19670126	DE 1964-B75782	19640307

AB cf. CA 58, 8916b. α-Halo-N,N-disubstituted carbamoyl halides R1R2CXN(COX)CR3R4Z (I) where R1-R4 are H, an alkyl, aryl, or a combination of these, Z is H, Br, or Cl, and X is Br or Cl, can react with alkali or alkaline earth alkoxides at -30 to +100° in an indifferent solvent to form the corresponding ether derivs. in which the acyl halogen is not affected. Thus, 144 parts 30% NaOMe in MeOH is added at -10 to 0° with stirring to 142 parts ClCH2NMeCOCl prepared according to Ger. 1,154,087 (see Belg. 620,028, CA 59, 11524a). The temperature is raised to 40-50° and stirring is continued for 3 hrs. The NaCl which ppts. is filtered and the filtrate distilled to give 85% MeOCH2NMeCOCl, b15 62-8°, nD 1.445. Similarly prepared are the following derivs. of I (% yield, b.p./mm., and nD given): (MeOCH2)2NCOCl, 78, 98-103°/25, 1.439; (MeOCH2)2NCOBr, 76, 116-18°/29, 1.441; MeOCH2NMeCOBr, 78, 83-6°/19, 1.460; N-(3,5-dichloro-3,5-dimethylmorpholyl)carbamoylchloride 69, 126-9°/19-20, -; PrCHEtCH2OCH2NMeCOCl, 63, 139-42°/1.5, 1.445.

IT 5367-80-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 5367-80-6 CAPLUS
CN 4-Morpholinecarbonyl chloride, 3,5-dimethoxy-3,5-dimethyl- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:507657 CAPLUS
DOCUMENT NUMBER: 65:107657
ORIGINAL REFERENCE NO.: 65:20017e-f
TITLE: Methacrylic acid derivatives
PATENT ASSIGNEE(S): Lonza Ltd.
SOURCE: 12 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

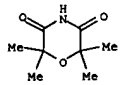
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6601905		19660817	NL 1966-1905	19660215
PRIORITY APPLN. INFO.:			CH	19650216

GI For diagram(s), see printed CA Issue.

AB The title compds. are prepared by treatment of I or its derivs. with mineral acids. Thus, to 10 g. I in 100 ml. MeOH and 10 g. CuSO4 was added dropwise 0.0826 mole H2SO4 and the mixture refluxed 1 hr. and distilled with steam to yield 42.6% ROMe (through the abstract R = CH2:CMeCO) and 8.7% ROH, while 35% solid II separated in the condenser. To 10 g. II was added 0.065 mole H2SO4 and 0.118 mole MeOH and the mixture heated 20 min. in an autoclave at 170° and refluxed 1 hr. to yield 79% ROMe and 17% ROH. To 10 g. Me2C(C.tplbond.N)OCMe2CO2H was added 0.065 mole H2SO4 and 0.118 mole MeOH and the mixture heated 20 min. at 150° to yield 37.2% ROMe and 14.5% ROH. Similar heating of O(CMe2CO2H) with H2SO4 and MeOH afforded 11.5% ROH and 11.1% ROMe.

IT 10258-47-6, 3,5-Morpholinedione, 2,2,6,6-tetramethyl-
(formation in manufacture of methacrylic acid and its Me ester)

RN 10258-47-6 CAPLUS
CN 3,5-Morpholinedione, 2,2,6,6-tetramethyl- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:507656 CAPLUS
DOCUMENT NUMBER: 65:107656
ORIGINAL REFERENCE NO.: 65:20017a-e
TITLE: New derivatives of chloramphenicol
INVENTOR(S): Gapp, Fritz; Margreiter, Hans; Schmid, Ekkehard
PATENT ASSIGNEE(S): Biochemie G.m.b.H.
SOURCE: 11 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

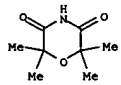
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AT 249031		19660825	AT 1964-1810	19640302
PRIORITY APPLN. INFO.:			AT	19640302

AB The primary OH-group of chloramphenicol reacts with isocyanatocarboxylic acid esters R1CH(N:CO)(CH2)xCO2R2 (I) to give (chloramphenicolcarbamido)carboxylic acid (A) esters. Thus, 160 ml. pyridine and 129 g. Et isocyanatoacetate were added to a suspension of 323 g. chloramphenicol in 1l. AcOEt to give a clear solution After 40 hrs. at room temperature the precipitate was filtered off with suction, washed with ether, and dried to give 325 g. Et (chloramphenicolcarbamido)acetate (II), m. 138-40°. Addnl. 53.3 g. II were obtained from the filtrate after extraction of the pyridine with dilute HCl and concentration of the pyridine-free solution NaOH (2N, 115 ml.) was added dropwise to a suspension of 100 g. II in 300 ml. EtOH. After 10 hrs. at room temperature the clear solution was concentrated in vacuo, diluted with H2O, and acidified with diluted HCl to precipitate the acid. The precipitate was filtered off, washed with H2O and dried to give 80.7 g. (chloramphenicolcarbamido)acetic acid, m. 150-3°, Ca salt m. 160-5°, Na salt m. 120-30°, dibenzylamine salt m. 153-6°, dibenzylethylenediamine salt m. 112-16°. Similarly obtained were (isocyanatocarboxylic acid ester used, m.p. of the corresponding A acid ester, m.p. of the A acid, and salts given): Me L-α-isocyanato-γ-methylmercaptobutyrate, 171-2.5°, 141-4°, -; Me DL-α-isocyanato-γ-methylmercaptobutyrat, 115-40°, 132-6°, -; Me D-α-isocyanato-γ-methylmercaptobutyrate, 145-6°, oil, -; Me L-α-isocyanatoisocaproate, 133-4°, 120-5°,-; Me DL-α-isocyanatoisocaproate, oil, oil, Na 145-8°; Me DL-α-isocyanatoisovalerate, oil, oil, Na 142-4°; Et DL-α-isocyanatopropionate, 160-2°, 205-6°, -; Me DL-α-isocyanato(phenyl)acetate, 176-7°, amorphous, Na 166-70°; di-Me L-α-isocyanatoglutarate, 151-2°, 117-25°, -; di-Me L-α-isocyanatosuccinate, 153-4°, oil, -; Me ε-isocyanatocaproate, 104-6°, oil, -; Me L-isocyanatoisocapoate 133-4° (EtOH), 86-8° (EtOH-H2O), Na 135-40°, dibenzylamine salt m. 160-5°, dibenzylethylenediamine salt m. 198-201° (EtOH) Ca 173-6°; Me D-isocyanatoisocaproate 78-80° (EtOH-H2O), dibenzylamine 189-91°, dibenzylethylenediamine 183-5° (EtOH-H2O). The new derivs. give stable aqueous solns. or suspensions, their toxicity is lower

L6 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
than that of the Na salt of chloramphenicol monosuccinate. They split up in vivo and have a depot effect compared to chloramphenicol.

IT 10258-47-6, 3,5-Morpholinedione, 2,2,6,6-tetramethyl-
(formation in manufacture of methacrylic acid and its Me ester)

RN 10258-47-6 CAPLUS
CN 3,5-Morpholinedione, 2,2,6,6-tetramethyl- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:403658 CAPLUS
DOCUMENT NUMBER: 65:3658
ORIGINAL REFERENCE NO.: 65:617e-g
TITLE: α-Nitrilo-α'-carboxydiisopropyl ether and its derivatives
PATENT ASSIGNEE(S): Lonza Ltd.
SOURCE: 14 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6507494		19651213	NL 1965-7494	19650611
PRIORITY APPLN. INFO.:			CH	19640612

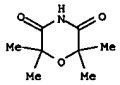
GI For diagram(s), see printed CA Issue.

AB The title compound (I) was prepared as the K or Na salt, by treating 4-nitroso-2,2,5,5-tetramethyl-3-oxotetrahydrofuran (II) in benzene or toluene with water in the presence of KOH or NaOH as catalyst. Further hydrolysis yields α,α'-dicarboxydiisopropyl ether (III). Operating with lower amts. or in the absence of catalyst yields IV, which could be also esterified. Operating in pyridine, in the presence of benzenesulfonylchloride yields V. Thus, equimol. amts. II and 25% KOH were refluxed 10-15 min., cooled, shaken with Et2O, and the aqueous phase slowly mixed with an equimol. amount HCl, while cooling, and extracted with Et2O. The extract was dried, and evaporated in the cold at slightly reduced pressure, to give raw I (yield 81%), which was recrystd. to give I, m. 72.5° (ligroine). Further refluxing of I until NH3 formation ceased, and neutralization with 1 mole HCl, gave III (yield 80%), which recrystd. gave III, m. 158° (water or C6H6). II (98.8%) (0.0585 mole) in 40 g. toluene and 0.2 g. NaOH were refluxed 2 hrs., and evaporated in vacuo to give IV (yield 48%). Recrystn. from 1% HCl, gave another 37% IV. Benzenesulfonylchloride (0.22 mole) was added dropwise to a solution of 0.2 mole II in 100 g. pyridine at 80°, while stirring, to give V (yield 80.5%), m. 156° (Me2CO). I and III are used in the production of polyesters and polyamides, and IV and V in the production of formaldehyde resins.

IT 10258-47-6, 3,5-Morpholinedione, 2,2,6,6-tetramethyl-
(preparation of)

RN 10258-47-6 CAPLUS

CN 3,5-Morpholinedione, 2,2,6,6-tetramethyl- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:11109 CAPLUS
DOCUMENT NUMBER: 64:11109
ORIGINAL REFERENCE NO.: 64:1972g-h,1973a-c
TITLE: Carbamoyl chlorides
INVENTOR(S): Koenig, Karl H.; Pommer, Horst
PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik A.-G.
SOURCE: 23 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

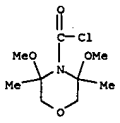
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 660727		19650906	BE 1966-727	19650305
FR 1432865			FR	
NL 6502858			NL	
PRIORITY APPLN. INFO.:			DE	19640307

AB The α-halogen atom of halocarbamoyl halides (CA 59, 11524a) reacts with alcs., mercaptans, or carboxylic acids in preference to the acyclic halogen. Thus, to 142 parts ClCH2NMeCOCl, cooled at -10-0°, 144 parts 30% NaOMe MeOH solution was added. The mixture was kept 3 hrs. at 40-50° and distilled to yield 92.5% MeOCH2NMeCOCl, b15 69-73°, n25D 1.451. Similarly, the following ROCH2NMeCOCl were prepared (R, b.p., n25D, and % yield given): Et, b25 93-5°, 1.447, 89; Pr, b16 98-100°, 1.445, 82; iso-Pr, b26 111-14°, 1.443, 84.5; Bu, b23 118-20°, 1.4483, --; iso-Bu, b22 114-16°, 1.4447, --; CMe3, b18 110-11°, 1.440, --; CH2CH2Cl, b0.3 85-8°, 1.4774, --; CH2CHMeCl, b0.3 81-4°, 1.471, --; CH2C.tplbond.CH, b2 83-4°, 1.4756, --; CHMeC.tplbond.CH, b0.5 65-7°, 1.4678 --; CMe2C.tplbond.CH, b0.5 67-8°, 1.4652, --; CH2CH:CH2, b0.5 56-8°, 1.457, --; CH2CH2CN, b0.2 83-6°, 1.470, --; CH2CH2OMe, b0.3 63-4°, 1.452, --; CH2CH2OEt, b0.1 65-7°, 1.454, --; CH2CH2OPr, b0.2 69-71°, 1.457, --; CH(CH2Cl)2, b0.4 93-5°, 1.482, --; CH2CH2Br, b0.4 87-9°, 1.479, --; 2-ethylhexyl, b22 134-6°, 1.445, --; cyclohexyl, b26 121-3°, n25D 1.442, --; n-C13H27, b0.1 104-6°, 1.441, --; CH2CH2Ph, b0.3 97-8°, 1.472, --; CH2CCl3, b0.8 98-100°, 1.496, --; Ac, b23 114-16°, 1.457; 69; COEt, b1 92-4°, --, 62; COCH2Cl, b0.5 88-9°, --, 74; COCH:CH2, b0.3 86-8°, --, --; COCCl3, b0.3 109-10°, --, --. Also prepared were MeOCH2NMeCOBr, b19 83-6° n25D 1.460; (MeOCH2)2NCOCl, b25 98-103°, n25D 1.439; (MeOCH2)2NCOBr, b29 116-18°, n25D 1.441; (AcOCH2)2NCOCl, b0.8 93-5°, yield 63.5%; MeOCHMeNEtCOCl, b26 100-2° n25D 1.447; AcOCHMeNMeCOCl, b3.5 99-101°, n20D 1.458, yield 72%; AcSCH2NMeCOCl, b20 106-7°; MeSCH2NMeCOCl, b19 87-9°, b26 99-101°, yield 73%; Me2CHSCH2NMeCOCl; (MeSCH2)2NCOCl, b18 106-9°, yield 58%; PhCH2SCH2NMeCOCl, b0.1 100-1°; C12H25SCH2NMeCOCl, b0.2 112-14°; the following carbamoyl chlorides were also prepared (substituents, and b.p. given): N-(3,5-dimethoxy-3,5-dimethylmorpholino), b19-20 126-9°, N-α-methoxymorpholino, b22 121-3°, N-(α-acetoxymorpholino), b0.3 94-6°; and N-(α-methylthiomorpholino), b0.5 97-8°; and N-(α-methoxypiperidino), b20 118-19° (n25D 1.450); N-(α-acetoxypiperidino), b0.1 89-90°; N-(α-methylthiopiperidino), b0.3 86-7°. The compds. are intermediates for the preparation of plant protection agents.

IT 5367-80-6, 4-Morpholinecarbonyl chloride, 3,5-dimethoxy-3,5-dimethyl-
(preparation of)

RN 5367-80-6 CAPLUS

CN 4-Morpholinecarbonyl chloride, 3,5-dimethoxy-3,5-dimethyl- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1964:38348 CAPLUS
DOCUMENT NUMBER: 60:38348
ORIGINAL REFERENCE NO.: 60:6732c-f
TITLE: α-Substituted aldehydes. XXIX. Favorskii rearrangement with chloroisobutanal
AUTHOR(S): Kirrmann, Albert; Joschek, Hans Ingo
CORPORATE SOURCE: Ecole Norm. Super., Paris
SOURCE: Bulletin de la Societe Chimique de France (1963), (11), 2483-6
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

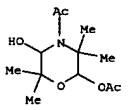
AB cf. CA 59, 15279b. The rearrangements of α-halo ketones to branched acids by basic reactants have been studied (Tchoubar, CA 50, 9283i). Anionic migration of the functional H in halo aldehydes produces an unbranched α-acid. The effects of the presence of alcoholates and of NH3 on Favorskii transpositions of α-chloroisobutanal were investigated. A suspension of alkali alcoholate acted on the chloroisobutanal to form an isobutyric ester as well as the epoxy ether. A suspension of NaNH2 caused the same rearrangement with the formation of isobutyramide. The same metallic amide in solution in liquid NH3 led to a heterocyclic compound of the morpholine type. Expts. were made on α-chloroisobutanal with NaOMe and LiOMe, iso-PrONa and tert-BuONa, with and without the presence of the corresponding alcohols, with NH4Cl, and with NaCl + NH3 in the presence of liquid NH3 and of ether. Products were analyzed by gas chromatography and by infrared spectrometry. The reaction of α-chloroisobutanal with Na methylate by the method of Stevens (S., et al., CA 49, 8804d,. S. and Gillis, CA 51, 16477a) yielded about 20%, Me isobutyrate without alc. and only traces with alc. Me isobutyrate, b. 93°, was obtained in 23-g. yield by treating 7 g. Li suspended in 1 l. Bu2O with 70 g. chloroisobutanal in 100 cc. Bu2O at 0° and refluxing for 3 hrs. The yield of the isopropyl ester from 1.07 moles iso-PrONa and 1 mole aldehyde was about 20% without alc. and a trace with alc. In the latter case, 30 g. diisopropyl acetal of α-hydroxyisobutanal b15 76-8°, n23 1.4140, was obtained. In all cases, the Favorskii rearrangement seemed to be linked to a heterogeneous reaction. It corresponded to the benzilic mechanism (T., loc. cit.). Negatively charged O formed by nucleophilic addition at the carbonyl group of the group B (either MeO- or NH2-) as well as the neg. α-substituent, chlorine, was attracted by the pos. centers of the surface of the reactive solid containing cations. An anionic migration of H permits replacement of the Cl, with formation of R2CHCOB-. The same type of primary addition of the anion B at the carbonyl in a homogeneous medium permits favorable orientation of neg. O in an antiparallel position with respect to the Cl and the isolation of an epoxide for B = MeO-. With B = NH2- a more complex evolution leads to other derivs.

IT 91691-33-7, 2,5-Morpholinediol, 4-acetyl-3,3,6,6-tetramethyl-, 2-acetate
(preparation of)

RN 91691-33-7 CAPLUS

CN 2,5-Morpholinediol, 4-acetyl-3,3,6,6-tetramethyl-, 2-acetate (7CI) (CA INDEX NAME)

L6 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L6 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1963:477724 CAPLUS
DOCUMENT NUMBER: 59:77724
ORIGINAL REFERENCE NO.: 59:14515f-h,14516a-b
TITLE: Nematocides
INVENTOR(S): Langdon, William K.; Levis, William W.,Jr.
PATENT ASSIGNEE(S): Wyandotte Chemicals Corp.
SOURCE: 5 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

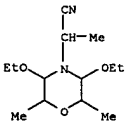
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3104199		19630917	US 1960-33636	19600603
BE 627705			BE	
FR 1365965			FR	
NL 288611			NL	
PRIORITY APPLN. INFO.:			US	19600603

AB 2-Amino alkanonitriles (I), having at least 3 C atoms, were effective nematocides. These compds. can be divided into several sub-groups. The simplest members of the class of nematocidal agents are alkylsubstituted I, e.g., α-methyl-α-(methylamino)-propionitrile, which can be prepared by treating acetone cyano-hydrin with MeNH2. The second subgroup is the group of N- substituted poly(cyanoalkyl) alkylene polyamines, e.g., N,N'-bis(1-cyanoethyl)ethylenediamine, which can be prepared by treating lactonitrile with ethylenediamine. The third subgroup is N-substituted (cyanoalkyl) alkoxyalkylamines. N-(1-Cyano-ethyl)ethoxyethylamine can be prepared by treating lactonitrile with ethoxyethylamine. The fourth subgroup is α-substituted piperazinealkanonitriles, e.g., α,α,α',α'-pentamethyl-1,4-piperazinediacetonitrile, which can be prepared by treating acetone cyanohydrin with 2-methylpiperazine. The fifth subgroup is α-substituted morpholinealkanenitriles, e.g., α-methyl-4-morpholineacetonitrile, which can be prepared by treating lactonitrile with morpholine. The sixth subgroup is α-substituted aceto-nitrile derivs. of bis(2- or 3-aminoalkyl) ethers of poly(oxyalkylene)polyols, e.g., bis [N-(1-cyanoethyl)-3-aminopropyl] ether of polypropylene glycol which can be prepared by treating polypropylene glycol with acrylonitrile in the presence of a basic catalyst to produce a bis(cyanoethyl) ether of polypropylene glycol, catalytically hydrogenating the latter to produce a bis(3aminopropyl) ether of the polypropylene glycol, and treating the latter with lactonitrile to give the nematocidal agent. This compound has an average mol. weight of 400. The nematocidal agents can be utilized in any conventional manner, as in soil application by spraying, drenching, or dusting. Superior results were obtained in subsoil applications when the nematocidal agents were introduced into the soil to a depth of ≤6 in. These nematocidal agents can be embodied in dusts containing carrier or fillers, as well as in liquids, and can be applied together with fertilizers, insecticides, fungicides, and (or) herbicides.

IT 91973-05-6, 4-Morpholineacetonitrile, 3,5-diethoxy-α,2,6-trimethyl-

L6 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
(nematocide)

RN 91973-05-6 CAPLUS
CN 4-Morpholineacetonitrile, 3,5-diethoxy-α,2,6-trimethyl- (7CI) (CA INDEX NAME)



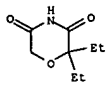
L6 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1960:34276 CAPLUS
DOCUMENT NUMBER: 54:34276
ORIGINAL REFERENCE NO.: 54:6724e-i,6725a
TITLE: Some 2,2-disubstituted-3,5-morpholinediones
AUTHOR(S): Skinner, Glenn S.; Bicking, John B.; Lovett, John R.
CORPORATE SOURCE: Univ. of Delaware, Newark
SOURCE: Journal of Organic Chemistry (1959), 24, 1587-8
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 54:34276

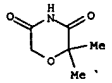
AB In general, the 3,5-morpholinediones were prepared from the suitably substituted esters of glycolic acid by converting them to diesters of diglycolic acid, then to the diamides or ammonium salts which were pyrolyzed to the substituted 3,5-morpholinediones. Preliminary pharmacol. screening tests indicated that compds. with like substituents possess similar activities as hypnotics and anticonvulsants. NaNH2 (19.5 g.) in 300 cc. Et2O treated dropwise under reflux with 66 g. Et α-hydroxyisobutyrate, refluxed 2 hrs., H2O added, the dried Et2O layer distilled, the 23 g. of product, b13 125-8°, dissolved in 25 cc. liquid NH3 in 175 cc. alc., the solution heated 5 days at 70-80° in a pressure bottle, and the solution concentrated gave 15.4 g. α,α-dimethyldiglycolamide (I), m. 162-3° (alc.). I (14.3 g.) heated 0.5 hr. at 200°/60 mm., the temperature raised to 260°, and the mixture distilled at 20 mm. gave 6.3 g. 2,2-dimethyl-3,5-morpholinedione, m. 74-6° (C6H6-ligroine). NaH (2.4 g.) in 100 cc. C6H6 treated during 25 min. with 16 g. Et α-ethyl-α-hydroxybutyrate, stirred 40 min., 18.4 g. BrCH2CO2Et added dropwise, the mixture refluxed 2 hrs., H2O added, and the organic layer dried and distilled gave 9.2 g. oil, b22 152-7°. A total of 90.7 g. of this oil in 340 cc. hot HCl heated 16 hrs. on the steam bath gave 41.5 g. α,α-diethyldiglycolic acid (II), m. 146-8° (EtOAc). II (28.5 g.) in 90 cc. NH4OH evaporated to dryness, the salt heated 25 min. at 190° at 50 mm., the bath temperature raised to 210°, the pressure lowered to 14 mm., and the product distilled gave 10.4 g. 2,2-diethyl-3,5-morpholinedione, m. 62-3° (iso-PrOH-H2O). Ethylphenylhydroxyacetic acid (11.4 g.) refluxed 2.5 hrs. with 60 cc. MeOH containing 0.3 cc. H2SO4, the mixture treated with 50 cc. H2O and 50 cc. saturated NaHCO3, the solution saturated with NaCl, extracted with Et2O, and the aqueous layer worked up gave 11.1 g. Me ethylphenylhydroxyacetate (III), b0.9 86-8°, n25D 1.5080. III (18.8 g.) added dropwise during 2 hrs. to 1.9 g. NaH in 200 cc. C6H6 at room temperature, stirred 6.5 hrs., refluxed 1.5 hrs., at room temperature, treated with 13.4 g. BrCH2CO2Et, refluxed 1 hr., treated with 100 cc. H2O, neutralized, and the C6H6 layer washed with NaHCO3 gave 14.7 g. Me α-ethyl-α-phenyl-α-carbethoxymethoxyacetate (IV), b0.7 133-5.5°, n25D 1.4945. IV (4.2 g.) in 100 cc. MeOH saturated with dry NH3 at -5° in a pressure bottle, left 1 week at 45-55°, and the solvent removed gave a quant. yield of α-ethyl-α-phenyldiglycolamide (V), m. 175° (MeOH-Et2O) (decomposition). V was pyrolyzed at 210-20° to give an amber oil; this oil in hot MeOH treated with C, and the filtrate treated with H2O gave 0.67 g. 2-ethyl-2-phenyl-3,5-morpholinedione, m. 124-5° (MeOH-Et2O).

IT 118767-37-6, Diglycolimide, α,α-diethyl-
118978-70-4, Diglycolimide, α,α-dimethyl-
(preparation of)

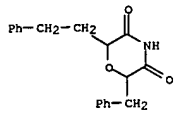
L6 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
RN 118767-37-6 CAPLUS
CN Diglycolimide, α,α-diethyl- (6CI) (CA INDEX NAME)



RN 118978-70-4 CAPLUS
CN Diglycolimide, α,α-dimethyl- (6CI) (CA INDEX NAME)



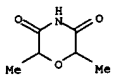
L6 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1952:29597 CAPLUS
DOCUMENT NUMBER: 46:29597
ORIGINAL REFERENCE NO.: 46:5012g-i,5013a
TITLE: γ-Phenyl-α-hydroxycrotonamide
AUTHOR(S): Bougault, J.; Cordier, P.
SOURCE: Bulletin de la Societe Chimique de France (1951) 430-4
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 7, 3110; 20, 2673; 21, 3051. A correction. The products of the reaction of PhCH: CHCH(OH)CONH2 with cold NaOH solution are shown to be 6-phenyl-4-hydroxy-4-carbamyl-3-benzyl-2-oxohexanoic acid (I), PhCH2CH2C(OH)(CONH2)CH(CH2Ph)COCO2H, and its diamide (II) instead of the previously reported PhCH2CH2C(OH)(CONH2)OC(OH)(CO2H)CH2CH2Ph and its diamide. The reaction products of I with various reagents must be accordingly corrected Thus, at 100° I loses 1 mol. H2O to give the lactone (III) which forms a thiosemicarbazone, m. 222°; I, II, and III heated in alkaline medium decompose into NH3 and PhCH2CH2COCO2H (IV). I with KMnO4 gives α-hydroxy-α-phenethyl-β-benzylsuccinimide (V), m. 120°, which on boiling with strong bases decompose into a mixture of IV and PhCH2CH2CO2H. V with Na2CO3 gives the succinamic acid which with Ac2O at 100° yields first α-hydroxy-α-phenethyl-β-benzylsuccinic anhydride, m. 104°, and then α-phenethyl-β-benzylmaleic anhydride, m. 75°. Treating I with HCl in AcOH gives both diastereoisomeric lactones, m. 120° (VI) and 82° (VII), resp., of the 6-phenyl-4-hydroxy-3-benzyl-2-oxohexanoic acid (VIII); VI with bases yields a mixture of PhCH2CH2CHO and IV, while VII forms an acid, m. 142° (probably VIII), which on heating rearranges to α-phenethyl-β-benzylsuccinic anhydride, m. 74°. All the substituted hydroxysuccinic anhydrides previously reported (cf. P. Cordier, C.A. 24, 4284) must be replaced by the corresponding maleic anhydride derivs.
IT 854836-55-8, Diglycolimide, α-benzyl-α'-phenethyl- (correction)
RN 854836-55-8 CAPLUS
CN Diglycolimide, α-benzyl-α'-phenethyl- (5CI) (CA INDEX NAME)



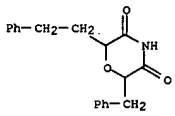
L6 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1935:30848 CAPLUS
DOCUMENT NUMBER: 29:30848
ORIGINAL REFERENCE NO.: 29:3982b-i,3983a-g
TITLE: Dilactylic acids
AUTHOR(S): Vieles, Pierre
SOURCE: Ann. chim. [II] (1935), 3, 143-224
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C. A. 28, 3714.5, 5408.6. A detailed study has been made of the different varieties of dilactylic acid (I) in order to compare the properties and stability of the various isomers and to obtain the optically active modifications. The crude mixture of isomeric acids was prepared by the action of MeCH(ONa)CO2Et on MeCHBrCO2Et (II) according to the method of Jungfleisch and Godchot (C. A. 1, 2683). A solution of 245g. of freshly distilled MeCH(OH)CO2Et, [α]D -4.80°, in 300 g. of rigorously dried Et2O was added slowly to 46 g. of Na wire in a well-cooled flask provided with a Hg valve. At the end of the reaction, 262 g. of II, prepared from MeCHBrCOBr (Ber. 20, 2026(1887)), in 200 g. of Et2O was added and the mixture was refluxed for 2 h. on the steam bath. The cooled mass was extracted with H2O and the dried Et2O layer was evaporated and distilled through a 1-m. Vigreux column, yielding, on redistn., 520 g. (75%) of crude di-Et dilactylate (III) which was saponified, acidified with H2SO4 and extracted with Et2O, producing crude I from which pure (d + l)-acid (IV), m. 112°, crystallized out on standing. The crude acid was separated into IV and the inactive modification (V), m. about 70°, by crystallization of the Mg salt. It was shown that the excess of IV exists in the initial ester III. The tedious separation through the Mg salt was evaded by fractional crystallization of crude dilactylamide (VI) (Compt. rend. 145, 70(1905)) in EtOH which gave, in fine needles, the (d + l)-amide (VII), m. 184°, and the inactive form in rhombic platelets (VIII), m. 136°. Both forms gave IV on saponification with alkalies but, on hydrolysis with N H2SO4, the corresponding acids were obtained. Treatment of the 2 dilactylic esters, (d + l) and (i), with NH3 gave VII and VIII. It was shown that VIII is totally isomerized by the action of alkalies. By heating with a 50% excess of PhNH2 in a sealed tube at 170° for 12 h., III was converted into a mixture of crude dilactylanilides which, on recrystn. from EtOH, yielded (d + l)-dilactylanilide, m. 168°, and the inactive modification, m. 124-6°. Both gave IV on saponification with alkalies but yielded the corresponding acids on hydrolysis with H2SO4. Similarly were prepared the (d + l)- and (i)-p-toluides, m. 179-80° and 145°, with analogous properties. Attempts to sep. the 2 esters from III by fractional distillation at 21 mm. failed on account of the limited range of b. p. of the 2 esters, (d + l), 124.5°, and (i), 128.5°. From the separation effected through the Mg salts and the amides it has been shown that the (d + l)-isomer is 5 times more abundant in III than the

L6 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
(i)-modification. Treatment of III or VI with 20% NaOH, neutralization with H2SO4 and extn. with Et2O gave IV, which, on heating with twice the theor. amt. of Ac2O, yielded the (d + l)-dilactylic acid anhydride, m. 36°, b20 108-9° d420 1.2106, nD20 1.44565, M. R. 31.70 (calcd. 31.30). Distn. of a mixt. of IV and PCl5 or SOCl2 gave (d + l)-dilactylic acid chloride, C6H8Cl2O3, b20 85°, reconverted into IV by hydration or by atm. exposure. Treatment of the chloride with EtOH and MeOH produced the esters: Et, C10H18O6, b21 124.5°, d428.1 1.0283, n428.1 1.4140, M. R. 53.12 (calcd. 53.96) , and Me, C8H14O5, b21 113-14°, d428.5 1.0910, nD28.5 1.4157, M. R. 43.75 (calcd. 44.56). IV gave normal Na, K, NH4 and Mg salts. By crystn. in org. solvents VII was spontaneously resolved into its optical antipodes, m. 208°, [α]Hg, ±80°. With H2O, at low temps., a hydrated racemic complex is formed. On heating at 230-40°, VII was transformed by loss of NH3 into the corresponding dilactylimide, C6H9NO3, m. 122° (C. A. 1, 2683). It has been shown that dilactyldiamide in aq. soln. undergoes spontaneous resoln. and a detailed physico-chem. study has been made of this extremely distinct resoln. As a result it has been possible to prep. the active amides in reasonably large quantities and from them to produce, for the first time, the optically active acids and some of their derivs. It is also possible, by the use of strychnine, to resolve IV, provided sufficient recrystns. are made. The biochem. resoln. with the aid of Penicillium glaucum and Aspergillus niger was unsuccessful. Spontaneous resoln. gave VII, [α015]v ±90.22°, changed on heating at 225°, partially to the racemate, m. 184°, and partially to the imide which, under all conditions, proved to be inactive. VII yielded the active acids, m. 88° [α17]v ±126.8°, rotatory dispersion αJ/αV 0.891, αI/αV 1.725. The acid obtained has always the same sign as the generating amide. Treatment of the acid with Ac2O gives the corresponding anhydride (IX) with reversed sign, b20 108-10°, d420 1.2100, nD20 1.44549, [α]V ±18.57°, rotatory dispersion αJ/αV 0.90, αI/αV 1.26. The action of alc. on the active forms of IX gave the active Et esters, b20 123-4°, d428 1.0300, nD28 1.418, [αV19] ±109.27°, αJ/αV 0.881, αI/αV 1.685. Active salts, C6H8Na2O5, [α]D 84.1°, and C6H8MgO5.3H2O, [α]V 20.71° with the same sign as the acids were prepd. From the relations between the signs of the active dilactylic acids and their derivs. and a consideration of the formulas of dilactylic anhydride and the dilactide it follows that the former is a trans deriv. and the latter a cis form. The passage of the acid to these 2 forms is accompanied by a strong augmentation of the rotatory power. Sapon. of VIII with 0.5 N H2SO4 gave an acid, m. 60-5°, which was freed from traces of the accompanying (d + l) -isomers by refluxing for 4 h. with Ac2O and, after removal of the Ac2O, distg. for a short time at reduced pressure. Crystn. of the solidified residue from a mixt. of benzene and Et2O gave pure inactive dilactylic acid, m. 72-3°, which could not be converted into either the anhydride or the chloride since it was not attacked by SOCl2, gave tars on treatment with PCl5 and decompd. on heating. Direct esterification of the acid yielded the Et ester, b21 128.5°, d428.1 1.0251, nD28.1 1.41892, M. R. 53.72 (calcd. 53.96). The normal Na, K and NH4 salts of the inactive acid were prepd. The dilactyldiamide and HgO gave a Hg deriv., regenerating the amide when treated with acids. On heating, the inactive dilactyldiamide gives the (d + l)-dilactylimide but at a much

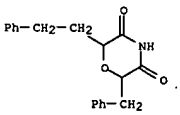
L6 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
lower temp. (180°) than the (d + l) -amide. From a comparison of the (d + l) and inactive dilactylic acids it would seem that the 2 CO2H groups of the (i)-acid are further apart than in the active modifications or at least in a position less favorable to cyclization. With the aid of the above facts plane formulas are proposed to represent the spatial configurations. Some of the exptl.results and generalizations may be applicable to the other homologs of diglycolic acid whose chem. study is yet little advanced.
IT 4430-01-7P, Dilactylimide
RL: PREP (Preparation)
(preparation of)
RN 4430-01-7 CAPLUS
CN 3,5-Morpholinedione, 2,6-dimethyl- (8CI, 9CI) (CA INDEX NAME)



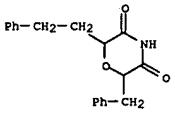
L6 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1926:21858 CAPLUS
DOCUMENT NUMBER: 20:21858
ORIGINAL REFERENCE NO.: 20:2673e-f
TITLE: A type of ether oxide of a katone hydrate
AUTHOR(S): Bougault, J.
SOURCE: Compt. rend. (1926), 182, 1224-5
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. C. A. 19, 3265; 20, 1232, 1798, 2157. A correction. The formula of the imide prepared by KMnO4 oxidation of the amino acid PhCH2CH2C(OH)(CO2H)OC- (CH2CH2Ph)(OH)CONH2 should be PhCH2CH2CH.CO.NH.CO.CH(O)CH2Ph instead of PhCH2CH2C.CO.NH.CO.C(O)CH2Ph, the formulas of other derived compds. being correspondingly subject to correction.
IT 854836-55-8P, 3,5-Morpholinedione, 2-benzyl-6-phenethyl-
RL: PREP (Preparation)
(preparation of)
RN 854836-55-8 CAPLUS
CN Diglycolimide, α-benzyl-α'-phenethyl- (5CI) (CA INDEX NAME)



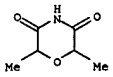
L6 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1926:21857 CAPLUS
DOCUMENT NUMBER: 20:21857
ORIGINAL REFERENCE NO.: 20:2673b-e
TITLE: Organic peroxides. X. Classification of the reactions of the diacyl peroxides. XI. Action of dibenzoyl peroxide on cyclohexane
AUTHOR(S): Gelissen, H.; Hermans, P. H.
SOURCE: Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1926), 59B, 662-6
CODEN: BDCBAD; ISSN: 0365-9488
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. C. A. 20, 1611. The reactions of the diacyl peroxides may be classified into the following groups: 1. Pyrogenic decomposition with elimination of 2 mols. CO2: (RCO)2O2 → 2CO2 + R2; this reaction takes place when the peroxide is heated alone or in a solvent above its m.
p. 2. Reactions according to the R. H. scheme with elimination of 1 mol. CO2 and participation of the solvent: (see structure). 3. Reactions in which a sym. cleavage of the O bridge, without elimination of CO2, occurs:
(RCO)2O2 + 2H → 2RCO2H (hydrogenation, action of secondary amines and of substances sensitive to dehydrogenation, of Grignard reagents and of alkali halides). 4. Reactions in which the diacyl peroxides act like acid anhydrides: (RCO)2O3 + R'NH2 (or HOH) → RCO2OH + R'NHCOR (or RCO2H) (action with H2O, bases, primary amines, alcs. (in the cold), etc.). Naturally, 2 or more of the above types of reactions may occur simultaneously. A new reaction according to the R. H. scheme and further illuminating the general validity of the scheme is reported. Bz2O2 (60.5 g.) refluxed in 150 g. dry cyclohexane dissolves and evolves CO2 for 22 hrs,; distillation now gives 134.0 g. distillate and 63.0 g. residue. From the
residue are obtained 5 g. phenylcyclohexane, b17 80°, b760 239°, solidifies 7°, nD18 1.5274, 5.2 g. BzOH and about 50 g. of a viscous yellow mass non-volatile with steam from which was isolated about 5 g. of p-PhC6CO2H. The distillate yielded 4.6 g. C6H6 (isolated as PhNO2).
IT 854836-55-8P, 3,5-Morpholinedione, 2-benzyl-6-phenethyl-
RL: PREP (Preparation)
(preparation of)
RN 854836-55-8 CAPLUS
CN Diglycolimide, α-benzyl-α'-phenethyl- (5CI) (CA INDEX NAME)



L6 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1925:25066 CAPLUS
DOCUMENT NUMBER: 19:25066
ORIGINAL REFERENCE NO.: 19:3265b-f
TITLE: Phenyl-α-hydroxycrotonamide. An example of the ether of ketone hydrate
AUTHOR(S): Bougault, J.
SOURCE: Compt. rend. (1925), 180, 1944-6
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. C. A. 7, 1486. The product of the action of soda on phenyl-α-hydroxycrotonic amide is the amido acid, PhCH2CH2C(OH)(CO2H)OC(CH2CH2Ph)(OH)CONH2, containing an ether grouping as a
result of the dehydration between the hydroxyls of the ketone hydrate group. With KMnO4 it gives an imide (I) and CO2. The reaction is very complex, involving a change in the linkage of the C atoms. I m. 120° and on prolonged boiling with soda, is decomposed into PhCH2CH2COCO2H, PhCH2CH2CO2H and NH3. When dissolved in hot Na2CO3 until there is no turbidity upon cooling, I is hydrolyzed to the corresponding amido acid, (II) or (III), m. 170°. If the hydrolysis is continued with NaOH, the product is the dibasic acid IV, m. 204°. This action is reversible. IV when heated with Ac2O for several min. at 100°, gives an anhydride m. 104° and regenerates IV with alkalies. If the heating with Ac2O is prolonged for several hrs., there is obtained a different anhydride (V) or (VI), m. 75°, isomeric with the first, insol. in cold aqueous Na2CO3 and slightly acid; dissolved in
weak NaOH and acidified with HCl, it regenerates the anhydride itself and not the IV. The Me ester m. 53° and, upon saponification again yields the
anhydride in large part. Na-Hg is without action upon IV, while it reduces the anhydride, yielding a new dibasic acid PhCH2CH2CH(CO2H)CH(CH2Ph)CO2H, m. 170°.
IT 854836-55-8P, 3,5-Morpholinedione, 2-benzyl-6-phenethyl-
RL: PREP (Preparation)
(preparation of)
RN 854836-55-8 CAPLUS
CN Diglycolimide, α-benzyl-α'-phenethyl- (5CI) (CA INDEX NAME)



L6 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1907:11115 CAPLUS
DOCUMENT NUMBER: 1:11115
ORIGINAL REFERENCE NO.: 1:2683h-i,2684a-e
TITLE: On Diglycollic Acid and its Homologues
AUTHOR(S): Jungfleisch, E.; Godchot, M.
SOURCE: Compt. rend. (1907), 145, 70-73
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB Diethyl diglycolate, O(CH2CO2C2H5)2, was prepared by treating the sodium salt of ethyl glycollate with ethyl chloracetate in anhydrous ether; b20 129-130°. Diethyl Methyldiglycollate, C2H3.O2C.CH(CH2)CO2C2H3, from the sodium salt of ethyl lactate and ethyl chloracetate, or the sodium salt of ethyl glycollate and ethyl α-brompropionate, b20 122-125°, D20 1.0743; insoluble in water. Methyldiglycollic acid, HO2C.CH2OCH(CH3)CO2H, m. 30°. Very soluble in ether and alcohol, difficultly soluble in benzene; very hygroscopic. The alkali and alkali earth salts are very soluble in water and insoluble in alcohol. When the acid was distilled, it was converted into its cyclo-anhydride, b23 122° 125°, D20 1.2729. Treatment with water regenerates the acid. The anhydride reacts with ammonia at ordinary temperature giving the amide of methyldiglycollic acid, NH2COCH2.O.CH(CH3)CONH3, which crystallizes from a mixture of alcohol and acetone in small prisms, m. 126°; very soluble in water. When heated at 150°, ammonia was evolved and the amide derivative, obtained. Amide of Dilactic acid. O(CH(CH3)CONH3)2, m. 156°, easily soluble in water and alcohol, difficultly soluble in ether and benzene. Imide, crystallized from benzene in prismatic crystals, m. 123°, soluble in water and alcohol, insoluble in ether.
IT 4430-01-7P, Dilactylimide
RL: PREP (Preparation)
(preparation of)
RN 4430-01-7 CAPLUS
CN 3,5-Morpholinedione, 2,6-dimethyl- (8CI, 9CI) (CA INDEX NAME)



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